AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of binding a text body to a cover with an adhesive to form a bound document, the method comprising:

applying an adhesive to ~~a~~ an edge contacting surface of each of a plurality of sheets of the text body on an individual sheet-wise basis, wherein the adhesive is applied to the edge contacting surface of each of the plurality of sheets without applying any adhesive to side surfaces of the corresponding sheet; and

adhering the plurality of sheets to the cover on an individual sheet-wise basis by making line contact between the edge contacting surface of each sheet and the cover and by curing the adhesive, wherein the applied adhesive forms a non-zero contact angle with the edge contacting surface.

2. (Cancelled)

3. (Previously Amended) The method of claim 1, wherein a viscosity of the adhesive is greater than 1000 centipoises and less than 15,000 centipoises.

4. (Currently Amended) The method of claim 1, comprising preparing each of the plurality of sheets of the text body along the edge contacting surface prior to applying the adhesive.

5. (Currently Amended) The method of claim 4, wherein preparing increases a surface area of the edge contacting surface, exposes a plurality of base fibers of the sheets, or increases the surface area and exposes the plurality of base fibers.

6. (Original) The method of claim 1, wherein applying the adhesive includes dispensing the adhesive from a dispenser, the dispenser including a time-pressure system, a piston-valve system, an auger-valve system, or a jetting system.

7. (Currently Amended) The method of claim 1, wherein applying the adhesive includes dispensing the adhesive from a dispenser including a Micro-Electro-Mechanical System, the adhesive is dispensed as a continuous bead on the edge contacting surface, and a volume of the continuous bead is less than or equal to three microliters.

8. (Currently Amended) The method of claim 7, wherein the Micro-Electro-Mechanical System is a thermal ink jet device.

9. (Currently Amended) The method of claim 1, wherein applying the adhesive includes dispensing the adhesive from a dispenser including a Micro-Electro-Mechanical System, the adhesive is dispensed as a plurality of individual sub-beads on the edge contacting surface, and a volume of each individual sub-bead is less than or equal to ten nanoliters.

10. (Original) The method of claim 9, wherein the Micro-Electro-Mechanical System is a thermal ink jet device.

11. (Currently Amended) The method of claim 1, wherein the plurality of sheets ~~includes~~ include an unfolded sheet and the edge contacting surface of the unfolded sheet is on an edge of the unfolded sheet.

12. (Currently Amended) The method of claim 11, comprising constraining the unfolded sheet to maintain the edge of the unfolded sheet straight.

13. (Currently Amended) The method of claim 1, wherein the plurality of sheets ~~includes~~ include a folded sheet and the edge contacting surface of the folded sheet is on a folded edge of the folded sheet.

14. (Original) The method of claim 13, comprising constraining the folded sheet to maintain the folded edge straight.

15. (Currently Amended) The method of claim 1, wherein the edge contacting surface makes line contact with the cover in an area of a spine of the bound document.

16. (Original) The method of claim 1, wherein the adhesive is a hot melt adhesive, a light curable adhesive, a two-part adhesive system or a moisture curable adhesive.

17. (Original) The method of claim 1, wherein applying the adhesive places a plurality of nanoliter volume beads on the contacting surface at an application rate of no slower than 1 bead per 100 microseconds.

18. (Currently Amended) The method of claim 1, wherein the plurality of sheets ~~includes~~ include a sheet of 20 lb bond paper, the adhesive is a light curable adhesive having a viscosity of 10,000 to 12,000 centipoises, applying the adhesive dispenses a plurality of individual sub-beads on the edge contacting surface, a volume of each individual sub-bead is less than or equal to ten nanoliters, and the adhesive cures in less than or equal to 20 seconds to bond the edge contacting surface to the cover.

19. (Original) The method of claim 1, comprising forming the cover around the text body.

20. (Original) The method of claim 1, wherein the adhesive has a first surface energy, the contacting surface has a second surface energy, and a difference between the first surface energy and the second surface energy is from 13 to 25 dynes per cm.

21. (Currently Amended) The method of claim 1, wherein the plurality of sheets ~~includes~~ include a cellulosic sheet having a surface energy of 30 to 37 dynes per cm, the adhesive is a light curable adhesive having a surface energy of 50 to 55 dynes per cm, applying the adhesive dispenses a plurality of individual sub-beads on the edge contacting surface, a volume of each individual sub-bead is less than or equal to ten nanoliters, and the adhesive cures in less than or equal to 20 seconds to bond the contacting surface to the cover, and

wherein calculations for surface energy are based on Young's equation, and the surface energy is determined from contact angles of a polar solvent and a nonpolar solvent.

22. (Original) The method of claim 1, wherein the applied adhesive is a first part of a two-part adhesive system and the method comprises applying a second part of the two-part adhesive system to the cover prior to adhering the plurality of sheets to the cover on an individual sheet-wise basis.

23. (Original) The method of claim 22, wherein the applied first part of the two-part adhesive system forms a non-zero contact angle with the contacting surface.

24. (Original) The method of claim 23, wherein a viscosity of the first part of the two-part adhesive system is greater than 1000 centipoises and less than 15,000 centipoises.

25. (Currently Amended) The method of claim 22, comprising preparing each of the plurality of sheets of the text body along the edge contacting surface prior to applying the first part of the two-part adhesive system.

26. (Currently Amended) The method of claim 25, wherein preparing increases a surface area of the edge contacting surface, exposes a plurality of base fibers of the sheets, or a combination thereof.

27. (Original) The method of claim 22, wherein applying the first part of the two-part adhesive system includes dispensing the first part of the two-part adhesive system from a dispenser, the dispenser including a time-pressure system, a piston-valve system, an auger-valve system, or a jetting system.

28. (Currently Amended) The method of claim 22, wherein applying the first part of the two-part adhesive system includes dispensing the first part of the two-part adhesive system from a dispenser including a Micro-Electro-Mechanical System, the first part of the two-part adhesive system is dispensed as a continuous bead on the edge contacting surface, and a volume of the continuous bead is less than or equal to three microliters.

29. (Currently Amended) The method of claim 28, wherein the Micro-Electro-Mechanical System is a thermal ink jet device.

30. (Currently Amended) The method of claim 22, wherein applying the first part of the two-part adhesive system includes dispensing the first part of the two-part adhesive system from a dispenser including a Micro-Electro-Mechanical System, the first part of the two-part adhesive system is dispensed as a plurality of individual sub-beads on the edge contacting surface, and a volume of each individual sub-bead is less than or equal to ten nanoliters.

31. (Original) The method of claim 30, wherein the Micro-Electro-Mechanical System is a thermal ink jet device.

32. (Currently Amended) The method of claim 22, wherein the plurality of sheets ~~includes~~ include an unfolded sheet and the contacting surface of the unfolded sheet is on an edge of the unfolded sheet.

33. (Currently Amended) The method of claim 32, comprising constraining the unfolded sheet to maintain the edge of the unfolded sheet straight.

34. (Currently Amended) The method of claim 22, wherein the plurality of sheets ~~includes~~ include a folded sheet and the edge contacting surface of the folded sheet is on a folded edge of the folded sheet.

35. (Original) The method of claim 34, comprising constraining the folded sheet to maintain the folded edge straight.

36. (Currently Amended) The method of claim 22, wherein the edge contacting surface makes line contact with the cover in an area of a spine of the bound document.

37. (Currently Amended) The method of claim 22, wherein applying the first part of the two-part adhesive system places a plurality of nanoliter volume beads on the edge contacting surface at an application rate of no slower than 1 bead per 100 microseconds.

38. (Currently Amended) The method of claim 22, wherein the plurality of sheets ~~includes~~ include a sheet of 20 lb bond paper, the first part of the two-part adhesive system has a viscosity of 10,000 to 12,000 centipoises, applying the first part of the two-part adhesive system dispenses a plurality of individual sub-beads on the edge contacting surface, a volume of each individual sub-bead is less than or equal to ten nanoliters, and the two-part adhesive system cures in less than or equal to 20 seconds to bond the edge contacting surface to the cover.

39. (Original) The method of claim 22, comprising forming the cover around the text body.

40. (Original) The method of claim 22, wherein the first part of the two-part adhesive system has a first surface energy, the contacting surface has a second surface energy, and a difference between the first surface energy and the second surface energy is from 13 to 25 dynes per cm.

41. (Currently Amended) The method of claim 22, wherein the plurality of sheets ~~includes~~ include a cellulosic sheet having a surface energy of 30 to 37 dynes per cm, the first part of the two-part adhesive system is a portion of a light curable adhesive system having a surface energy of 50 to 55 dynes per cm, applying the first part of the two-part adhesive system dispenses a plurality of individual sub-beads on the edge contacting surface, a volume of each individual sub-bead is less than or equal to ten nanoliters, and the light curable adhesive system cures in less than or equal to 20 seconds to bond the contacting surface to the cover, and

wherein calculations for surface energy are based on Young's equation, and the surface energy is determined from contact angles of a polar solvent and a nonpolar solvent.

42.-71. (Cancelled)

72. (New) The method of claim 1, wherein the edge contacting surface of each of the sheets is provided on an edge of the corresponding sheet, and wherein the side surfaces of each of the sheets extend from the edge along respective sides of the corresponding sheet.

73. (New) A method of binding a text body to a binding structure with an adhesive to form a bound document, the method comprising:

applying an adhesive to an edge contacting surface of each of a plurality of sheets of the text body on an individual sheet-wise basis, wherein the adhesive is applied to the edge contacting surface of each of the plurality of sheets without applying any adhesive to side surfaces of the corresponding sheet; and

adhering the plurality of sheets to the binding structure on an individual sheet-wise basis by making line contact between the edge contacting surface of each sheet and the binding structure and by curing the adhesive, wherein the applied adhesive forms a non-zero contact angle with the edge contacting surface.

74. (New) The method of claim 73, wherein the binding structure includes an intermediary piece between the plurality of sheets and a cover.

75. (New) The method of claim 73, comprising preparing each of the plurality of sheets of the text body along the edge contacting surface prior to applying the adhesive.

76. (New) The method of claim 75, wherein preparing increases a surface area of the edge contacting surface, exposes a plurality of base fibers of the sheets, or increases the surface area and exposes the plurality of base fibers.

77. (New) The method of claim 73, wherein the edge contacting surface of each of the sheets is provided on an edge of the corresponding sheet, and wherein the side surfaces of each of the sheets extend from the edge along respective sides of the corresponding sheet.